



Docket No.: R2184.0271/P271
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Pre Patent Application of:
Takashi Takahashi et al.

Application No.: 10/716,455

Confirmation No.:

Filed: November 20, 2003

Art Unit: 2811

For: SEMICONDUCTOR LIGHT EMITTER

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A summary/abstract translation of the non-English language references is enclosed.

A copy of each reference on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other

material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. R2184.0271/P271. A duplicate copy of this paper is enclosed.

Dated: March 26, 2004

Respectfully submitted,

By 

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Registration No.: 33,082

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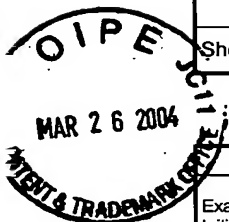
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Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	10/716,455-Conf. #6664
				Filing Date	November 20, 2003
				First Named Inventor	Takashi Takahashi
				Art Unit	2811
				Examiner Name	Not Yet Assigned
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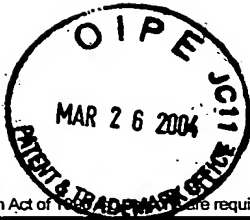


U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
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	BA	JP 8-195522	07-30-1996			
	BB	JP 6-37355	02-10-1994			
	BC	JP 2000-332363	11-30-2000			
	BD	JP 2002-118329	04-19-2002			
	BE	JP 10-126004	05-15-1998			
	BF	JP 10-145003	05-29-1998			
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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	Uesugi et al., "MOMBE Growth and Characterization of GaAsN/GaAsSb Superlattice Structure," The 62nd Japan Society of Applied Physics, 13p-T-13.	
	CB	Tateno et al., "Refractive Index of GaAsNSb Layers Grown on GaAs Substrates by MOCVD" The 62nd Japan Society of Applied Physics, 13p-T-12.	
	CC	Gambin et al., "Long Wavelength GaInNASb/GaAsSb Multiple Quantum Well Lasers " Electronics Letters 14th March 2002, Vol. 38, No. 6, pp. 277-278.	
	CD	Koyama et al. "Data Transmission Over Single-Mode Fiber by Using 1.2-μm Uncooled GaInAs-GaAs Laser for Gb/S Local Area Network" IEEE Photonics Technology Letters, Vol. 12, No.2, pp. 125-127, February 2000.	
	CE	Shunichi Sato, "Low Threshold and High Characteristic Temperature 1.3 μm Range GaInNAS Lasers Grown by Metalorganic Chemical Vapor Deposition" Japan J. Appl. Phys., Vol. 39, 05, Part 1, No. 6A, pp. 3403-3405(June 2000).	
	CF	Kondow et al., "GaInNAS: A Novel Material for Long-Wavelength-Range Laser Diodes with Excellent High-Temperature Performance" Japan J. Appl. Phys., Vol.35, Part 1, No. 2B, pp. 1273-1275 (February 1996)	
	CG	Gouardes et al., "GaInAs-GaInNAS-GaInAs Intermediate Layer Structure for Long Wavelength Lasers" IEEE Photonics Technology Letters, Vol. 14, No. 7, pp.896-898, (July 2002).	
	CH	Peng et al., "Suppression of Interfacial Atomic Diffusion in InGaNAS/GaAs Heterostructures Grown by Molecular-beam Epitaxy" Applied Physics Letters, Vol. 80, No. 25, pp. 4720-4722, (24 June 2002).	
	CI	Li et al., "Effects of Rapid Thermal Annealing on Strain-Compensated GaInNAS/GaAsP	



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Approved for use through 07/31/2006. OMB 0651-0031

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Sheet	2	of	2		

	Quantum Well Structures and Lasers" Applied Physics Letters, Vol. 78, No.1, (1 Jan. 2001).	
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